Acta Zoologica

INTERNATIONAL JOURNAL FOR ZOOLOGY

VOL.
64
1983

VOLUME 64 1983

VOLUME CONTENTS
AUTHOR INDEX

ROYAL SWEDISH ACADEMY OF SCIENCES/PERGAMON PRESS

Acta Zoologica

INTERNATIONAL JOURNAL FOR ZOOLOGY
PUBLISHED BY THE ROYAL SWEDISH ACADEMY OF SCIENCES

EDITORIAL OFFICE: Acta Zoologica, S-106 91 Stockholm, Sweden
CHIEF EDITOR: *Ragnar Olsson*, Stockholm
EXECUTIVE EDITOR: *Kaj Holmberg*, Stockholm

ADVISORY COUNCIL:

Björn Afzelius, Stockholm
Howard A. Bern, Berkeley
Quentin Bone, Plymouth
Geoffrey Burnstock, London
Romano Dallai, Siena
Rolf Elofsson, Lund
Per Flood, Bergen
Tsuneo Fujita, Niigata
Ragnar Fänge, Göteborg
Tryggve Gustafson, Stockholm
Nicholas D. Holland, La Jolla
Jan Erik Kihlström, Uppsala
George O. Mackie, Victoria
Arne Nørrevang, København
Lars Orrhage, Göteborg
Arthur N. Popper, Washington
Ian C. Potter, Murdoch
Ulrich Welsch, München

Acta Zoologica is an International Journal for Zoology which publishes original reports of all branches of animal structure research: functional cytology, histology and gross morphology as well as relevant techniques. Articles of purely local interest or of a descriptive or systematic character will, however, not generally be considered. Authors of papers with mainly phylogenetic contents are advised to submit their contributions to the cooperating journal *Zoologica Scripta*. From Vol. 62, 1981, the Journal *Zoon* has merged with *Acta Zoologica*.

Publishing & Advertising Offices: Headington Hill Hall, Oxford OX3 0BW, England; Maxwell House, Fairview Park, Elmsford, New York 10523, U.S.A. Published quarterly. Approximately 250 pages per annum.
Annual Subscription Rate 1984: For libraries, university departments, government laboratories, industrial and other multi-reader institutions: U.S. $80.00 per annum (including postage and insurance). Two year rate U.S. $152.00.
Subscription enquiries from customers in North America should be sent to: Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A., and for the remainder of the world to: Pergamon Press Ltd. Headington Hill Hall, Oxford OX3 0BW, U.K.
Specially reduced rates to individuals: In the interests of maximising the dissemination of the research results published in this important international journal we have established a two-tier price structure. Individuals whose institution takes out a library subscription may purchase a second or additional subscription for personal use at the much reduced rate of U.S. $40.00.
Microfilm Subscriptions and Back Issues: Back issues of all previously published volumes are available in the regular editions and on microfilm and microfiche. Current subscriptions are available on microfiche simultaneously with the paper edition, and on microfilm on completion of the annual index at the end of the subscription year.

Copyright © 1984, The Royal Swedish Academy of Sciences

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organisations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

PHOTOCOPYING INFORMATION FOR USERS IN THE U.S.A.

The Item-Fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying beyond that permitted by Section 107 or 108 of the United States Copyright Law is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 21 Congress Street, Salem, MA 01970. The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying. In case of doubt please contact your nearest Pergamon office.

The Item-Fee Code for this publication is: 0001-7272/84 $3.00+ .00

PERGAMON PRESS

HEADINGTON HILL HALL,
OXFORD OX3 0BW, ENGLAND

MAXWELL HOUSE, FAIRVIEW PARK,
ELMSFORD, NEW YORK 10523, U.S.A.

VOLUME CONTENTS

VOL.
64
1983

CONTENTS VOL. 64 NO. 1 1983

J.-Y. Sire and J. Géraudie	1	Fine structure of the developing scale in the cichlid *Hemichromis bimaculatus* (Pisces, Teleostei, Perciformes)
R. R. Campbell and J. F. Leatherland	9	Changes in calcium reserves in breeding lesser snow geese (*Chen caerulescens caerulescens*)
P. Burighel, C. Milanesi and A. Sabbadin	15	Blood cell ultrastructure of the ascidian *Botryllus schlosseri* L. II. Pigment cells
S. Holmgren and S. Nilsson	25	VIP-, bombesin- and neurotensin-like immunoreactivity in neurons of the gut of the holostean fish, *Lepisosteus platyrhincus*
S. Ferri	33	Relationships between cytoplasmic filaments and nuclear envelope in teleost (*Pimelodus maculatus*) endothelial cells
Å. Jespersen	39	Spermiogenesis in *Anaspides tasmaniae* (Thomson) (Crustacea, Malacostraca, Syncarida)
J. H. B. Diederen, H. G. B. Vullings, J. H. W. M. Rombout and A. T. M. de Gunst-Schoonderwoerd	47	The subcommissural organ–liquor fibre complex: the binding of catecholamines to the liquor fibre in frogs of the *Rana esculenta* complex
R. M. Santer and S. Holmgren	55	An ultrastructural and fluorescence histochemical study of the myenteric plexus of the stomach of the rainbow trout *Salmo gairdneri*
E. Baatrup	67	Ciliated receptors in the pharyngeal terminal buds of larval *Lampetra planeri* (Bloch) (Cyclostomata)
	77	New Books of Interest to Our Readers

CONTENTS VOL. 64 NO. 2/3 1983

R. C. Lethbridge, I. C. Potter, R. A. Bray and R. W. Hilliard	79	The presence of helminths in a Southern Hemisphere lamprey (*Geotria australis* Gray), with a discussion of the significance of feeding mechanisms in lampreys in relation to the acquisition of parasites
M. Reuter	85	Developmental changes and lytic activity in aminergic neurons of *Microstomum lineare* (Turbellaria)
J. F. Leatherland and K. Ronald	97	Immunohistochemical identification of cell types in the pars distalis of harp seals, *Phoca groenlandica*
M. R. Warburg and M. Rosenberg	107	Cerebral neurosecretory cells in the millipede, *Archispirostreptus syriacus*, De Saussure (Diplopoda, Spirostreptiadae)

W. J. Bailey and J. D. Sandow	117	Mechanisms of defensive stridulation in the bushcricket *Mygalopsis marki* Bailey (Copiphorini, Tettigoniidae)
M. Bergmann, J. Schindelmeiser and H. Greven	123	The glandular tissue in the testis of *Salamandra salamandra* (L.) (Amphibia, Urodela)
F. Cotelli and C. Lora Lamia Donin	131	Ultrastructure of the spermatozoon of *Squilla mantis*
E. Baatrup	139	Terminal buds in the branchial tube of the brook lamprey (*Lampetra planeri* (Bloch))—putative respiratory monitors
G. Sterba, G. Fredriksson and R. Olsson	149	Immunocytochemical investigations of the infundibular organ in amphioxus (*Branchiostoma lanceolatum*; Cephalochordata)
E. F. Fernández and R. M. Paz Doel	155	Cell types in the mesencephalic trigeminal nucleus of *Mauremys caspica*
	163	New Books of Interest to our Readers
	165	Errata

CONTENTS VOL. 64 NO. 4 1983

Announcement	167	The 10th International Symposium on Comparative Endocrinology
P. Joly and L. Caillère	169	Smelling behaviour of urodele amphibians in an aquatic environment: study in *Pleurodeles waltl.*
K. J. Pedersen	177	Fine structural observations on the turbellarians *Stenostomum* sp. and *Microstomum lineare* with special reference to the extracellular matrix and connective tissue systems
D. Lewinson, M. Rosenberg and M. R. Warburg	191	Developmental changes in the epidermal surface cells of salamander larva
J. E. Thompson, K. D. Burrow	199	Localization of two brominated metabolites, aerothionin and homoaerothionin, in spherulous cells of the marine sponge *Aplysina fistularis* (= *Verongia thiona*)
B. Borg, P. Ekström and T. van Keen	211	The parapineal organ of teleosts
F. Marmo, G. Balsamo and E. Franco	219	The formation of otoliths in the frog *Rana esculenta*. Scanning electron microscopic and X-ray diffraction studies
A. S. N. El-Hawawi and P. E. King	227	Spermiogenesis in a pycnogonid *Achelia echinata* Hodge
Volume Contents and Author Index Vol. 64, 1983	i	

AUTHOR INDEX

Baatrup, E. 67, 139
Bailey, W.J. 117
Balsamo, G. 219
Barrow, K.D. 199
Bergmann, M. 123
Borg, B. 211
Bray, R.A. 79
Burighel, P. 15

Caillère, L. 169
Campbell, R.R. 9
Cotelli, F. 131

de Gunst-Schoonderwoerd, A.T.M. 47
Diederen, J.H.B. 47

Ekström, P. 211
El-Hawawi, A.S.N. 227

Faulkner, D.J. 199
Fernández, E.F. 155
Ferri, S. 33
Franco, E. 219
Fredriksson, G. 149

Greven, H. 123

Hilliard, R.W. 79
Holmgren, S. 25, 55

Jespersen, Å. 39
Joly, P. 169

King, P.E. 227

Leatherland, J.F. 9, 97
Lethbridge, R.C. 79
Lewinson, D. 191
Lora Lamia Donin, C. 131

Marmo, F. 219
Milanesi, C. 15

Nilsson, S. 25

Olsson, R. 149

Paz Doel, R.M. 155
Pedersen, K.J. 177
Potter, I.C. 79

Reuter, M. 85
Rombout, J.H.W.M. 47
Ronald, K. 97
Rosenberg, M. 107, 191

Sabbadin, A. 15
Sandow, J.D. 117
Santer, R.M. 55
Schindelmeiser, J. 123
Sire, J.-Y. 1
Sterba, G. 149

Thompson, J.E. 199

van Veen, T. 211
Vullings, H.G.B. 47

Warburg, M.R. 107, 191

VOL. 64 1983